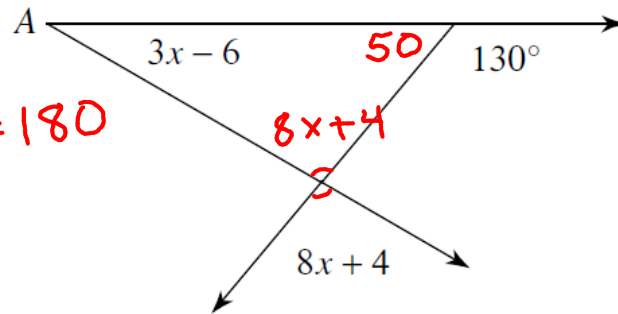


$$\begin{aligned} x + 74 &= 71 \\ -74 &\quad -74 \\ \hline x &= -3 \end{aligned}$$

$$\begin{array}{r} 180 \\ -54 \\ \hline 126 \\ -55 \\ \hline 71 \end{array}$$



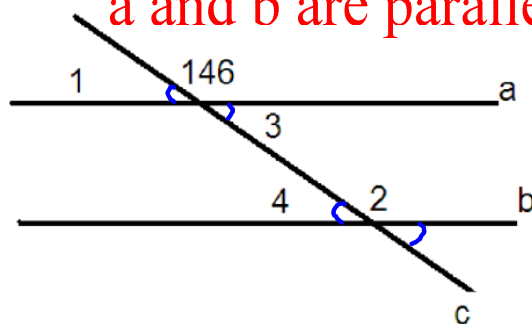
$$3x - 6 + 8x + 4 + 50 = 180$$

$$\begin{aligned} 11x + 48 &= 180 \\ -48 &\quad -48 \\ \hline 11x &= 132 \end{aligned}$$

$$\begin{array}{r} 11x = 132 \\ \hline 11 \quad 11 \\ \hline x = 12 \end{array}$$

Geometry Review – Triangles and Angles

a and b are parallel



- 1) Angle 1 34
- 2) Angle 2 146
- 3) Angle 3 34
- 4) Angle 4 34

Define, in words, the following and state which segment, in the image below, matches the description.

D, E, and F are the midpoints of each side.

5) median

\overline{CD} or \overline{DC}

6) altitude

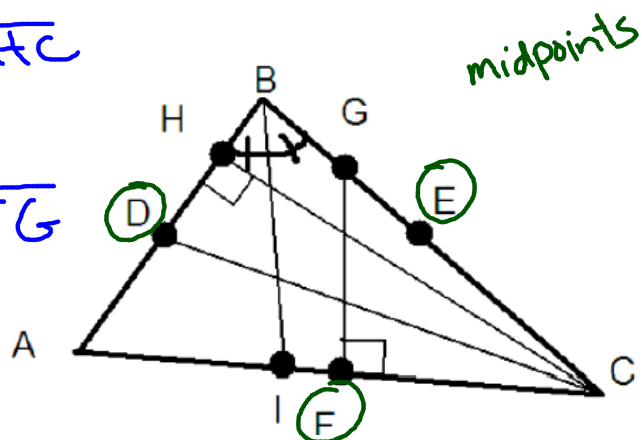
\overline{CH} or \overline{HC}

7) angle bisector

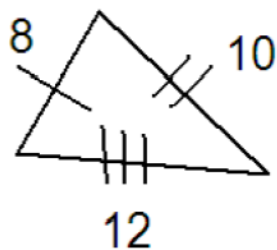
\overline{IB} or \overline{BI}

8) perpendicular bisector

\overline{GF} or \overline{FG}



Name the type of congruence that each pair of triangles displays, and fill in the missing values, if applicable.

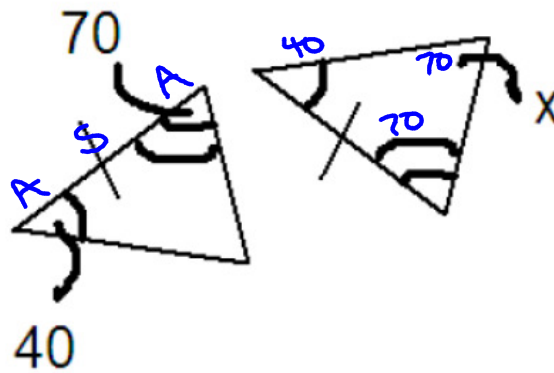


9) Type of congruence SSS

10) $x = 10$

11) type of congruence ASA

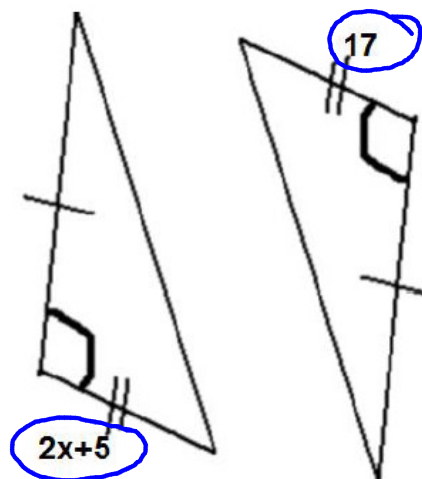
12) $x = 70$



13) type of congruence SAS

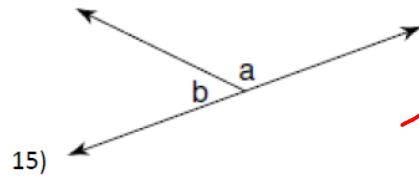
14) $x = 6$

$$\begin{aligned} 2x + 5 &= 17 \\ -5 &-5 \\ \hline 2x &= 12 \\ \frac{2x}{2} &= \frac{12}{2} \\ x &= 6 \end{aligned}$$

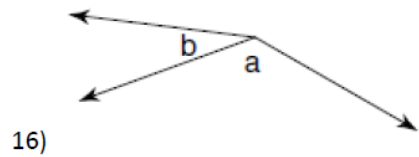


Name the relationship: complementary, linear pair, vertical, or adjacent.

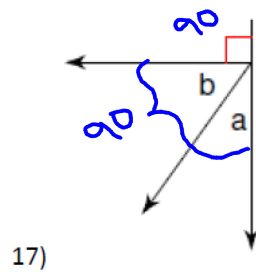
90 = next to
180



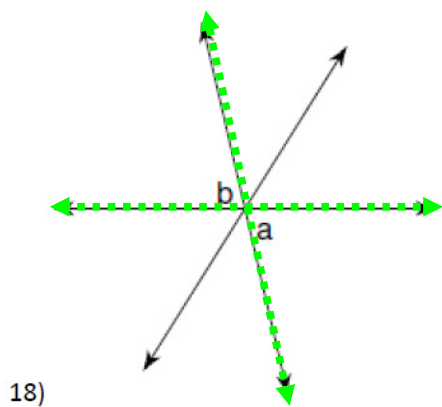
linear pair



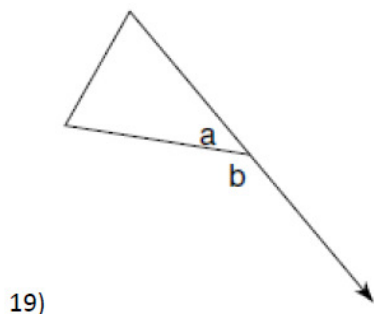
adjacent



complementary

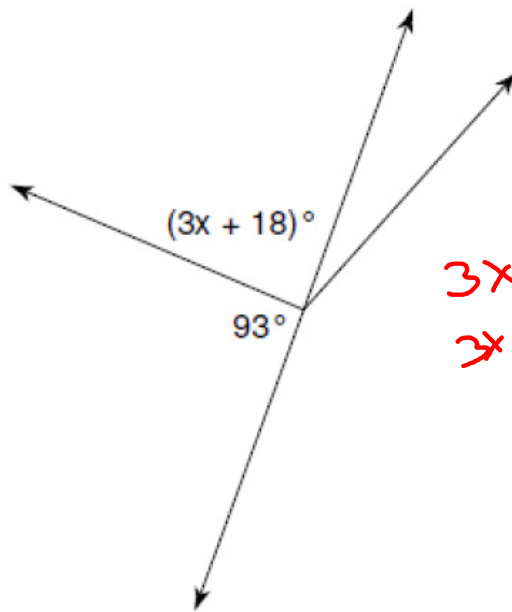


vertical pair



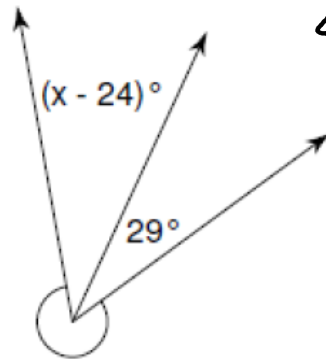
linear pair

Find the value of x .



$$\begin{aligned} 3x + 18 + 93 &= 180 \\ 3x + 111 &= 180 \\ 3x &= 69 \\ x &= 23 \end{aligned}$$

20)



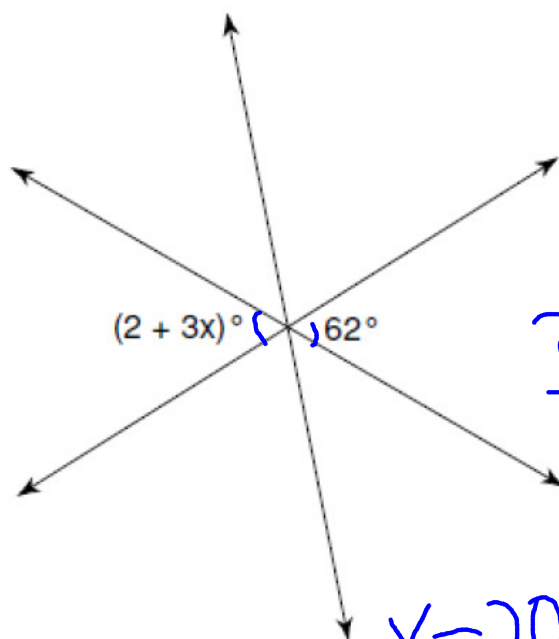
$$296 + 29 + x - 24 = 360$$

$$\begin{array}{r} 301 + x = 360 \\ -301 \quad -301 \\ \hline \end{array}$$

$$x = 59$$

21) 296°

22)



$$2 + 3x = 62$$

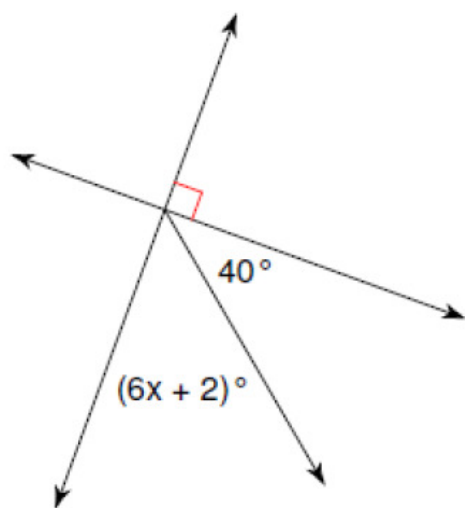
$$\underline{-2} \quad \underline{-2}$$

$$3x = 60$$

$$\underline{\quad 3 \quad} \quad \underline{\quad 3 \quad}$$

$$x = 20$$

23)



$$6x + 2 + 40 = 90$$

$$6x + 42 = 90$$

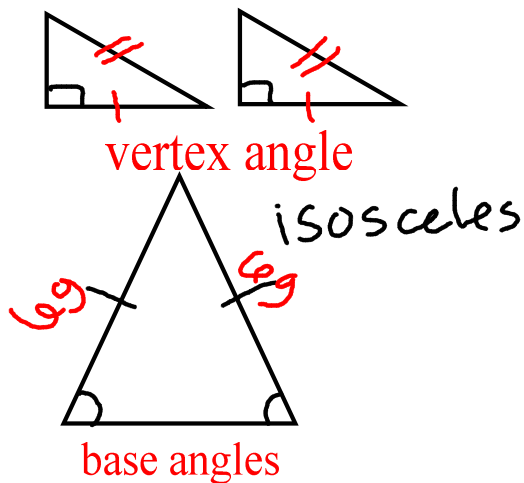
$$\underline{-42} \quad \underline{-42}$$

$$6x = 48$$

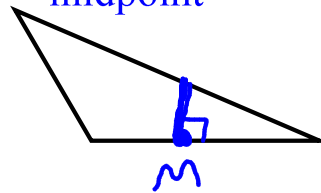
$$\underline{\quad 6 \quad} \quad \underline{\quad 6 \quad}$$

$$x = 8$$

Congruence
SAS AAS
SSS HL ASA



median-
midpoint to vertex
altitude
right angle, vertex
angle bisector-
Vertex, <in half
perpendicular
bisector
90 degrees
midpoint



The diagram shows a triangle with interior angles labeled $2x+5$, 70 , and 110 . An exterior angle is formed by extending the side with the 110 degree angle, and this exterior angle is labeled x .

$$\begin{aligned}
 110 + 2x + 5 + x &= 180 \\
 3x + 115 &= 180 \\
 -115 &\quad -115 \\
 3x &= 65 \\
 \frac{3x}{3} &= \frac{65}{3} \\
 x &= 21\frac{2}{3}
 \end{aligned}$$